

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 are pending. Claims 7 and 12 have been amended. No new matter has been added.

The outstanding Office Action rejects Claims 1, 2, 9, and 11 under 35 U.S.C. § 102(a) as anticipated by Ogino (International Publication No. WO 00/02338); and rejects Claims 3-8, 10, and 12 under 35 U.S.C. § 103(a) as unpatentable over Ogino in view of Kaku (U.S. Patent No. 5,812,593).

In regard to the rejection of Claims 1, 2, 9, and 11 under 35 U.S.C. § 102(a), Applicant respectfully traverse the rejection for the following reasons.

To establish anticipation of claim 1 under 35 U.S.C. § 102(a), the Office Action must show that each and every feature recited in claim 1 is either explicitly disclosed or necessarily present in Ogino.¹

Claim 1 recites a fading pitch detection apparatus comprising, *inter alia*, a synthesizer for synthesizing signals outputted from a plurality of demodulators with a phase difference in each multipath being maintained and a fading pitch detector for detecting a fading pitch based upon an output signal from the synthesizer. (emphasis added)

The outstanding Office Action asserts that Ogino teaches “demodulators with a phase difference.”² However, as agreed during the interview conducted on April 7, 2004, Ogino does not disclose the above-mentioned synthesizer feature and fading pitch detector feature of Claim 1. In the present invention, a synthesizer is configured to signals outputted from a plurality of demodulators with a phase difference in each multipath being maintained and a fading pitch detector is configured to detect a fading pitch based upon an output signal from the

¹ See M.P.E.P. § 2131.

synthesizer. Conversely, in Ogino, phases of signals from a plurality of demodulators are shifted in accordance with their respective arrival times (i.e., the phase difference in each multipath is adjusted) and then synthesized. The synthesized signal is then used to detect fading pitches. To be more specific, in Ogino, “each of baseband reception units 102 performs dispreading of received radiowaves while shifting the chip phase, i.e., the timing of the PN code, in accordance with the arrival times that are detected by arrived radiowave search circuit 103.”³ (emphasis added) “Power combiner 104 . . . combines signals after dispreading that are outputted from each of baseband reception units 102.”⁴ Then, “electric field intensity measurement unit 112 . . . measures the intensity of the received electric field based on signals outputted from power combiner 104 for detecting fading pitch.”⁵ Nowhere does Ogino disclose a synthesizer for synthesizing signals outputted from a plurality of demodulators with a phase difference in each multipath being maintained and a fading pitch detector for detecting a fading pitch based upon an output signal from the synthesizer, as recited in Claim 1.

Accordingly, Applicant submits that Claim 1 is patentable and the rejection of Claim 1 under 35 U.S.C. § 102(a) should be withdrawn. Independent Claim 11, although of different scope and/or statutory class, includes features similar to those in Claim 1 discussed above. Claims 2 and 9 depend from Claim 1. Thus, Applicant respectfully requests that the rejection of Claims 2, 9, and 11 under 35 U.S.C. § 102(a) be withdrawn as well.

In regard to the rejection of Claims 3-8, 10, and 12 under 35 U.S.C. § 103(a) as unpatentable over Ogino in view of Kaku, Applicant respectfully traverses the rejection for the following reasons.

Claim 7 recites a fading pitch detection apparatus comprising, *inter alia*, a synthesizer configured to synthesize signals outputted from a plurality of demodulators with a phase

² Office Action, page 1.

³ Col. 11, lines 11-15 of Ogino.

⁴ Col. 10, lines 28-30 of Ogino.

difference in each multipath being maintained, a transforming device configured to transform an input signal from the synthesizer to electric power, an auto-correlation detector configured to calculate an auto-correlated value of an output signal from the transforming device, and a fading pitch estimation device configured to calculate a fading pitch based upon a comparison result between the auto-correlated value and a predetermined threshold value.

As discussed above with respect to Claim 1, Ogino does not teach or suggest the above-mentioned synthesizer feature and fading pitch estimation device feature of Claim 7. Kaku does not cure the deficiencies of Ogino in this regard. For example, assuming Kaku could properly be combinable with Ogino, which Applicant disputes, Kaku does not teach or suggest at least a synthesizer configured to synthesize signals outputted from a plurality of demodulators with a phase difference in each multipath being maintained and a fading pitch estimation device configured to calculate a fading pitch based upon a comparison result between the auto-correlated value obtained by using the output from the synthesizer and a predetermined threshold value.

Accordingly, Applicant respectfully submits that Claim 7 is patentable and the rejection of Claim 7 under 35 U.S.C. § 103(a) should be withdrawn. Independent Claim 12, although of different scope and/or statutory class, includes features similar to those in Claim 7 discussed above. Claims 8 and 10 depend from Claim 7. Thus, Applicant respectfully requests that the rejection of Claims 8, 10, and 12 under 35 U.S.C. § 103(a) be withdrawn as well.

Claims 3-6 depend on Claim 1. As discussed above with respect to Claim 1, Ogino does not teach or suggest each and every element recited in Claim 1. For example, Ogino does not teach or suggest at least a synthesizer for synthesizing signals outputted from a plurality of demodulators with a phase difference in each multipath being maintained and a fading pitch detector for detecting a fading pitch based upon an output signal from the synthesizer, as

⁵ Col. 10, lines 38-41 of Ogino.

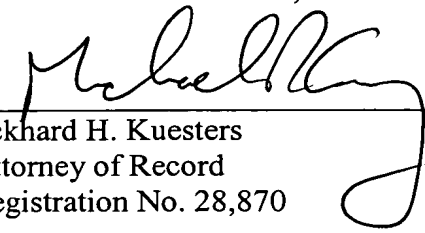
recited in Claim 1. Kaku does not cure the deficiencies of Ogino in this regard.

In view of the failure of Ogino and Kaku to teach or suggest all features of Claim 1, Applicant respectfully submits that Ogino in view of Kaku does not render Claim 1 obvious under 35 U.S.C. § 103(a). Since Claims 3-6 depend on Claim 1, Applicant respectfully requests that the rejection of Claims 3-6 under 35 U.S.C. § 103(a) be withdrawn and Claims 3-6 be allowed.

In view of the foregoing remarks, Applicant respectfully submits that each and every one of Claims 1-12 defines patentable subject matter, and that the application is in condition for allowance. Applicant respectfully requests reconsideration and reexamination of this application and timely allowance of the pending claims.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Eckhard H. Kuesters
Attorney of Record
Registration No. 28,870

Customer Number

22850

Tel: (703) 413-3000

Fax: (703) 413 -2220

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Michael R. Casey, Ph.D.
Registration No. 40,294